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Docket No. INTL-0159-US

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In Re Application Of: **Bradford H. Needham, et al.**

Serial No.	Filing Date	Examiner	Group Art Unit
09/243,701	February 2, 1999	T. Davis	2681

Invention: **Location-Based Vehicle Messaging System**

TO THE ASSISTANT COMMISSIONER FOR PATENTS:

Transmitted herewith in triplicate is the Appeal Brief in this application, with respect to the Notice of Appeal filed on

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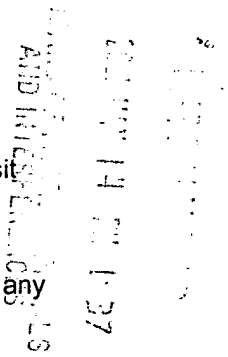

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Bradford H. Needham et al.	§	Group Art Unit:	2681
		§		
Serial No.:	09/243,701	§		
		§	Examiner:	T. Davis
Filed:	February 2, 1999	§		
		§		
For:	LOCATION-BASED VEHICLE MESSAGING SYSTEM	§	Atty. Dkt. No.:	INTL-0159-US (P6667)

Board of Patent Appeals & Interferences
Commissioner for Patents
Washington, D.C. 20231

APPEAL BRIEF

Sir:

Applicants respectfully appeal from the final rejection mailed February 6, 2001.

I. REAL PARTY IN INTEREST

The real party in interest is the assignee Intel Corporation.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF THE CLAIMS

All of the pending claims (15-25 and 27-29) are rejected. Each rejection is appealed.

IV. STATUS OF AMENDMENTS

All amendments were entered.

Date of Deposit: 5/9/01
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V. SUMMARY OF THE INVENTION

Referring to Figure 1, a system for providing information to a plurality of vehicle operators, keyed to the location of those vehicles, includes a server 10 coupled with a wireless link 15 having an antenna 14. The wireless link 15 may implement a radio frequency based transmission system, such as that used in connection with digital cellular telephones. The wireless link 15 may be part of the server 10 or may be at a separate location. The wireless link 15 may be a telephone base station coupled to the server 10 over a network such as the Internet.

The server 10 may have associated with it a linked audio database 12, which includes information about a plurality of different locations tied to particular location coordinate information. For example, each of the database entries may, in one embodiment of the present invention, be an audio file linked to coordinates that may, for example, have been generated by the global positioning system (GPS).

The server 10 may communicate, for example, by radio or cellular telephone, with a plurality of vehicles 16, e.g., vehicles 16a and 16b shown in Figure 1. Each of the vehicles may include an appropriate receiving antenna 22a or 22b. In addition, each vehicle may include its own position location system, e.g., a GPS system 18a and 18b, together with the appropriate antennas 20a and 20b. See Specification at p. 3, line 13 through p. 4, line 10.

In this way, the vehicles may request information from the server. Those requests may have appended GPS coordinate information. The server may then search its database 12 to find any audio files associated with the GPS position of the vehicle 16a, for example. If it finds such files, the server may transmit those files to the vehicle 16a so the operator can have the benefit of what others have recorded for a particular position along the roadway.

The information associated with a particular location may include descriptions of various driving conditions or information about sites along the way. In addition, messages may be stored for other drivers who may be known by a particular operator. For example, one operator may leave a message for another operator to turn at the next right turn.

In one embodiment of the present invention, each of the vehicles 16 may also include a compass, e.g., a digital compass 21, which provides direction information. In this way, only information associated with a given position and vehicle heading direction may be provided by the server. For example, vehicles traveling northbound on a given highway will receive information that was stored by northbound traveling vehicles and not by southbound traveling vehicles.

Referring to Figure 2, in accordance with one embodiment of the invention, the server may include a database 12, which includes data files 24. The files 24 may include text, video, or other data. For example, the files 24 may include audio files 26, which are essentially digital recordings of voice communications received from a variety of vehicles. Each of the audio files 26 may have associated coordinate information 28, which, in one embodiment of the present invention, may be GPS coordinate information.

In this way, each of the files 24 may be searched for particular GPS coordinates. All the files 26 associated with those coordinates which match the current position of a requesting vehicle may be transmitted to the vehicle. See Specification at p. 4, line 11 through p. 5, line 18.

Each of the files may also have a time stamp 25 so that after an amount of time, a file may be discarded. Thus, only relatively current information will be received by the vehicle for a given position. The files may also include a user name or a reply field to facilitate a response to the submitter. Other techniques used in bulletin board systems may also be used here.

Advantageously, the files 26 may also include a vehicle identifier 27, e.g., a telephone number. The file 24 may include not only the GPS coordinates 28, but also direction or compass information 29, which may also be transmitted by the vehicle 16 to the server 10.

Referring now to Figure 3, software 30 for enabling a vehicle 16 to transmit information to the server 10 is illustrated. Initially, a check at diamond 32 determines whether an audio file has been prepared by the operator of the vehicle. If so, the current GPS coordinates may be appended to the file, as indicated at block 34. In addition, compass information may be appended as well, if desired. The file may then compressed and transmitted, as indicated in block 38, for receipt by the server 10. The transmission may be undertaken over a radio or cellular telephone communication link. Other communication links can be used as well. See Specification at p. 5, line 19 through p. 6, line 22.

Referring now to Figure 4, software 40 for enabling a vehicle operator to request information associated with a given file begins by determining whether or not an information request has been initiated, as indicated in diamond 42. If so, the current GPS coordinate position is acquired as indicated in block 44. The request is then transmitted, as indicated in block 46, together with the present position information, and if desired, the directional information.

Turning now to Figure 5, the server may respond to a request for information linked to a particular location using the software 50. Initially, a check determines whether a request has been received from a vehicle as indicated in block 52. The database 12 is then searched (block 56) for other files which have matching GPS and compass/direction information.

The audio file (with or without the identifier) may then be compressed and transmitted to the vehicle as indicated in block 60. In a cellular phone system, the request may include the requester's cellular telephone number. Alternatively, the caller's telephone number may be

obtained using a caller identity delivery (CID) system. The audio file may be subsequently transmitted using the telephone information without tying up the user's telephone any more than necessary.

Moving on to Figure 6, software 62 begins by receiving an audio file, as indicated in block 64, from a vehicle. The audio file may be decompressed. The file is then stored by GPS coordinates and/or compass direction information associated with the audio file, as indicated in block 68. Time stamp data may be appended or may be obtained from the GPS system in one embodiment.

The vehicle may then receive audio information in response to a previous request using the software 70 shown in Figure 7. The audio file is received, as indicated in block 72, and may be decompressed. See Specification at p. 6, line 23 through p. 8, line 14.

In one embodiment, the server may continuously broadcast information to the vehicles. The vehicles may store this information, for example using a first in first out archiving system. A vehicle based processor may then be used to sort through the location information to identify files associated with the vehicle's current position. Those files may then be identified to the vehicle operator.

In one embodiment, illustrated in Figure 9, the server may send information that may be displayed on a digital map, showing locations with associated files. Those files may then be selected when the vehicle reaches those locations or at any other time. The messages may also be played automatically based on the vehicle's position. See Specification at p. 8, line 15 through p. 9, line 5.

VI. ISSUES

A. Are Claims 15-19 Obvious Over Fleck and the Well Known Prior Art?

B. Is Claim 20 Obvious Over Fleck and the Well Known Prior Art?

C. Is Claim 21 Obvious Over Fleck and the Well Known Prior Art?

D. Are Claims 22-25 and 27-29 Anticipated by Fleck?

VII. GROUPING OF THE CLAIMS

To simplify the appeal, claims 15-19 may be grouped. Claims 22-25 and 27-30 may also be grouped for convenience on appeal. The separate bases for patentability of the ungrouped claims are set forth in the following section.

VIII. ARGUMENT

A. Are Claims 15-19 Obvious Over Fleck and the Well Known Prior Art?

Claims 15-19 were rejected under §103 over Fleck and the "well known prior art." Hyziak is cited as teaching the well known prior art.

In his response to arguments in the final rejection, the Examiner makes three points:

1. "Fleck specifically discloses that information such as traffic events or traffic information is recorded together with a location identifier, and that this information is transmitted to other mobiles";

2. "Fleck also discloses wherein certain road conditions (e.g. traffic or accidents) are stored in a dynamic database (col. 5, lines 40-43)"; and

3. "Wherein this information is transmitted back to mobile units in the vicinity of the road conditions (col. 5, lines 40-65)".

Claim 15 calls for a server that receives audio messages from vehicles and transmits those messages to other vehicles. A storage medium is adapted to store the messages for access based on the position of the vehicle that transmitted the message.

Fleck does not teach a server which serves messages out to vehicles when they come to a position. In contrast, Fleck teaches a real time system. When an event occurs it is "immediately" sent to all of the vehicles in the same or neighboring cells. The event information is not stored and then served out to vehicles over time whenever they come to that location.

Thus the rejection of claim 15 cannot stand. Fleck does not teach a storage medium adapted to store messages "for access based on the position of the vehicle that transmitted the message". Hyziak does not teach anything relevant to such a server.

Item number 2 above in the Examiner's analysis is being read for more than it really should be. In particular, the cited material in Fleck does not in any way suggest that the road condition itself is stored in some type of database for subsequent transmission. To the contrary, it is very clear that the database simply stores whether or not a particular vehicle detours as suggested because of a road condition.

Fleck states that a control center 20 can disseminate to all vehicles the information about the event 14 (congestion). See Fleck column 5, lines 32-35. A potential detour is suggested and if the detour is taken a return signal is sent to the control center 20. See Fleck Column 5, lines 35-38. From the return signal from the vehicles, the control center can determine whether the recommended detour has been taken. See Fleck column 5, lines 38-40. At column 5, lines 40-43 (relied upon by the Examiner), Fleck says "the information received is processed by the application function in the control center 20". Clearly, the information that is received is not information about the congestion but whether or not the vehicles have taken the recommended detour. Further, it is stated that "the roadway information is assigned to a digital road map in a dynamic database 7". Clearly, the roadway information is the new route being taken by the detoured vehicle.

Further, Fleck states explicitly that in accident or congestion situations "it is important to send a traffic warning immediately to all traffic participants" see column 5 lines 60 and 61. This demonstrates that Fleck is not interested in storing data, received from vehicles, associated with location information and then serving that information out to those vehicles when those vehicles are proximate to that location. In contrast, Fleck is interested in a real time system where, when an event occurs, it is immediately sent to all of the vehicles in a particular location.

The difference is that Fleck does not store the information and then serve it out to vehicles over time when they come to that location. This point is also made in column 6 at lines 4-10 of Fleck. There it is explained that the network analyzes the message and "immediately" causes a signal to be sent to other mobile subscribers of the origin and neighboring cells. Again, it is clear that what happened is, when the signal is received, a warning is immediately transmitted. There is absolutely no suggestion that the condition is stored and then every time vehicles, proximate to that condition, report they are in position, they are again warned of the situation.

Claim 15 calls for a storage medium adapted to store messages for access based on the position of the vehicle that transmitted the message. There is simply no access mechanism that allows access to the database in Fleck based on the position of the vehicles. Instead, in real time, when an event occurs Fleck immediately transmits the message to the cell of the vehicle that reported the condition and to neighboring cells. There is no accessing of the database in the server and there is no accessing "based on the position of the vehicle that transmitted the message".

In the advisory action, the Examiner further relies on column 7 of Fleck. However, this citation teaches away from the claimed invention just like all the other sections of Fleck cited by

the Examiner. In the advisory action, the Examiner asserts that column 7 of Fleck teaches that the historical traffic information "is utilized for vehicles that are in the vicinity of the traffic situation." However, the Examiner again misses the point. The issue is whether or not the database is accessed based on the position of the vehicle that transmitted the message. In other words, the vehicle transmits a message to the server and the server provides its information based on the vehicle's position.

In contrast, in the cited portion of column 7 of Fleck, Fleck specifically states that "The data flow to the terminals is bi-directional, so that system server 9 can send current processed information directly back to individual terminals or all respective terminals." See column 7, lines 23-26 [Emphasis added]. Again the emphasis in Fleck is to provide current information presumably at the time it is received. There is absolutely no suggestion anywhere in Fleck that the information is provided in response to position information received from the vehicle.

Fleck is left with the situation which merely enables him to broadcast current information when it happens to either individual vehicles that want the information or generally. In contrast, with applicants' claimed solution, the current position of the vehicle can be determined and that vehicle can obtain whatever information is associated with the vehicle's current location.

Thus, the effort to combine Hyziak with Fleck fails for two reasons. No rationale in the prior art for combining the references is provided and neither reference or their combination teaches storing messages for access based on the position of the vehicle. Therefore, the rejection should be reversed.

B. Is Claim 20 Obvious Over Fleck and the Well Known Prior Art?

Claim 20 calls for the system of claim 15 [see section A above] adapted to time stamp said messages. Claim 20 was rejected over the combination of Fleck and well known prior art

citing column 5, lines 5-10 in Figure 5 of Fleck. However, a review of this material demonstrates that there is absolutely no teaching of any kind of time stamp.

The provision of the time stamp is useful in ensuring that outdated information is not provided at a given location or if it is provided, the receiving entity can be provided with the date information.

Therefore the rejection of claim 20 is without basis and should be reversed.

C. Is Claim 21 Obvious Over Fleck and the Well Known Prior Art?

Claim 21 further modifies claim 20 [see sections A and B above] to describe a system adapted to discard messages based on their time stamp.

No specific citation to the prior art is provided to support this rejection. It is respectfully submitted that there is absolutely no support for the rejection.

The ability to discard messages based on their time stamp is useful so that outdated information is not continually served out to parties.

Since the rejection of claim 21 is without any support, it should be reversed.

D. Are Claims 22-25 and 27-29 Anticipated by Fleck?

Claim 22 calls for a processor-based system mountable in a vehicle. Among other things, the claim calls for a transmitter to transmit requests for information with appended position information. The processor also sorts received information based on appended position information and identifies that information when the vehicle is proximate to a location associated with the information.

Claim 22 was rejected as being anticipated by Fleck.

There is no "processor" in Fleck that "sorts received information based on appended position information" and "identifies that information when the vehicle is proximate to a location

associated with the information". The system shown in Fleck does not sort through information and then effectively recall it when the vehicle comes to that location. Instead, it does something much simpler and less effective. Fleck just immediately recognizes the cell that transmitted the information and then immediately returns the information to all vehicles in that and neighboring cells.

Moreover, the device in Fleck that the Examiner relies on is in the central station. It is not in the vehicle, as claimed. Therefore, it cannot sort received information based on appended position information and identify that information when the vehicle in which the processor is riding is proximate to a locale associated with the information.

Therefore the rejection based on Fleck should be reversed.

IX. CONCLUSION

Since the rejections of the claims are baseless, they should be reversed.

Respectfully submitted,

Date: 5/8/01

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APPENDIX OF CLAIMS

The claims on appeal are:

15. A system for distributing audio messages to vehicles comprising:

a server that receives audio messages from vehicles and transmits those messages to other vehicles; and

a storage medium adapted to store said messages for access based on the position of the vehicle that transmitted the message.

16. The system of Claim 15 wherein said messages include appended vehicle position information.

17. The system of Claim 16 wherein said messages include appended vehicle direction information.

18. The system of Claim 15 including a radio frequency transmission device.

19. The system of Claim 18 including a cellular telephone link.

20. The system of Claim 15 adapted to time stamp said messages.

21. The system of Claim 20 adapted to discard messages based on their time stamp.

22. A processor based system mountable in a vehicle, said system comprising:

a processor;

a position locating device coupled to said processor;

a transmitter to transmit requests for information with appended position information; and

wherein said processor sorts received information based on appended position information and identifies that information when the vehicle is proximate to a location associated with the information.

23. The system of Claim 22 wherein said transmitter is a radio frequency transceiver.

24. The system of Claim 22 wherein said transmitter is adapted to append compass information.

25. The system of claim 22 wherein said system is adapted to receive information previously transmitted and stored and then relayed to the vehicle, based on the vehicle's position.

27. The system of Claim 22 wherein said transmitter is adapted to append information that identifies the transmitter.

28. The system of Claim 22 adapted to transmit audio files.

29. The system of Claim 22 adapted to receive audio files.